

State of Alaska
Department of Natural Resources
Division of Forestry
Fairbanks Area Office



**Forest Land Use Plan
Salcha Flood Salvage
NC-1595-F
8/15/2015**

I. Introduction	3
A. Legal description	4
B. Operational Period	4
C. Timber Disposal	4
D. Objectives and Summary	4
II. Affected Land Owners/Jurisdictions	4
A. State	4
B. Other Land Ownership	4
III. Harvest Methods, Silvicultural Actions, and Management of Non-timber Resources	
A. Timber Stand Description and History	5
B. Timber Harvest Activities	5
C. Site Preparation	5
D. Reforestation	6
E. Slash Abatement	7
F. Surface Water Protection	7
G. Wildlife Habitat	7
H. Cultural and Historical Resource Protection	8
I. Other Resources Affected by Timber Harvest and Management	8
IV. Roads and Crossing Structures	8
A. Road Design, Construction, and Maintenance	8
B. Side Slopes/ Mass Wasting	9
C. Crossing Structures	9
D. Road Closures	10
E. Material Extraction	10
F. Other Resources Affected by Roads or Material Extraction	10
V. Approval	11
Appendix A: Timber Sale Maps	12
Appendix B: Comment Matrix	13

I. Introduction

Project File Number: NC-1595-F

Division of Forestry Office: Fairbanks

Area Forester: Paul Maki (Acting)

Forest Practices Geographic Region (AS 41.17.950): 3

This Forest Land Use Plan (FLUP) covers proposed forest operations on approximately 300 acres of land west of Harding Lake in the Salcha area. It is intended to provide the best available information regarding the proposed harvest of timber, and management of other non-timber uses in compliance with AS 38.05.112 and AS 41.17.060, and must be adopted by the DNR before the proposed activity can occur.

[X] This Forest Land Use Plan is for timber sale(s) which have been determined to be in the best interest of the state pursuant to AS 38.05.035 (e) and 38.05.945; *ADL#420349 1/20/2015*

[] This Draft Forest Land Use Plan is for timber sale(s) for which a Preliminary Best Interest Finding is currently out for review. A final best interest finding must be completed prior to adoptions of a final FLUP pursuant to AS 38.05.035 (e) and 38.05.945;

[] This [Draft/Final] Forest Land Use Plan is for timber to be harvested that does not require a final finding pursuant to 38.05.035 (e) and notification under 38.05.945.

This Forest Land Use Plan was made available for public comments; the review period ended on 8/10/2015. After public and agency review of the draft FLUP, the DOF reviewed comments, made changes as appropriate (see Appendix B), and has issued this final FLUP. This Forest Land Use Plan has been adopted by the Department of Natural Resources. Site specific compliance with the Alaska Forest Resources and Practices Act and the Regulations, as well as the Final Finding for this proposed project are reflected in this Forest Land Use Plan and will be implemented in the Timber Sale Contract.

The decision to offer timber for sale was made through the best interest finding process, and is not subject to review under the FLUP. Following adoption of the final FLUP, the DOF will determine when to offer the timber for sale. Site specific actions required by the FLUP will be incorporated into the timber sale contract.

[X] Other Documents are referenced in this FLUP. This timber sale is designed to be consistent with the management intent of the following documents:

- Tanana Valley State Forest Management Plan

The administrative record for this sale is maintained at the Division of Forestry Fairbanks Area Office filed as NC-1595-F.

A. Legal description (see also map in Appendix A): Sections 19, 20, 29-32 of Township 5 South, Range 4 East and Section 5 of Township 6 South, Range 4 East, Fairbanks Meridian.

B. Operational Period: Tentatively Winter 2015/2016-Spring 2020

C. Timber Disposal

☒ Timber will be sold and will have a contract administrated by the State

☒ Timber will be available to the public; permits obtained by the public will be issued by the State.

☐ Other

D. Objectives and Summary

Seasonal flooding due to silt deposition and the continuing meandering nature of the Tanana River caused this mortality event within the TVSF over the course of approximately 3-5 years. Evidence of this was observed during a flight over the area in August 2014 and appears in recent aerial imagery. The area was ultimately ground-truthed by boat in September. Following identification of the area, DOF reviewed existing land use plans, considered markets for the salvage timber, and designed this proposal to salvage as much timber as possible from within the identified area on state land, while protecting the fish, wildlife, and water resources, and avoiding impacts to local access, recreation uses and archaeological sites.

The management objectives for the proposed timber sales are:

- Harvest the commercial sawtimber and fuelwood before further significant loss occurs.
- Provide timber products for the industry and the state and local economy.
- Provide a source of accessible firewood for the residential heating needs of local residents.

II. Affected Land Owners/Jurisdictions

Activity on ownership:	Access		Written
	Easement	Harvest	Representative Approval
A. State			
<input checked="" type="checkbox"/> Tanana Valley State Forest	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Other state land managed by DNR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> University of Alaska	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mental Health Trust	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> School Trust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Other Land Ownership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Land Owner: _____

Land Owner Representative: _____

III. Harvest Methods, Silvicultural Actions, and Management of Non-timber Resources

Forest operations will be designed to:

- Protect fish habitat and water quality in compliance with the best management practices in 11 AAC 95.260-.370,
- Manage for the other land uses and activities identified in AS 41.17.060 and the Best Interest Finding for this timber sale, and
- Ensure prompt reforestation and maintenance of site productivity in compliance with AS 41.17.060(c) and 11 AAC 95 .375-.390.

Harvest and Silvicultural Methods:

[X] The silvicultural actions are described in this document, and no prescription was written or is necessary

[] A silvicultural prescription has been written and is attached to this document in Appendix B

A. Timber Stand Description and History

The stands to be salvaged are a mixture of fully mature white spruce and balsam poplar with some interspersed black spruce, birch and other hardwoods. The flooding has increased in severity over the last 5 years to the point that large portions of the area appear to have been and will continue to be lost to the river. Remarkably much of the units contain standing timber, but damage from rot, insects, and winds are becoming more prevalent. Given these conditions and the eroding nature of the river channels, the marketability of the wood will continue to devalue.

B. Timber Harvest Activities

Timber Harvest Activities are displayed in Table 1.

Table 1. Timber Harvest Activities

Legal Description	Acres	Topography	Silvicultural Action	Logging Method
T5S, R4E, Sec. 20, 29, 30, 31, 32	~300	Relatively Flat/Flood Plain	Clearcut	Ground

C. Site Preparation

[X] Site preparation will not be necessary. There is either sufficient residual stocking, or because there has been sufficient soil disturbance by logging to forego scarification.

[] Site preparation will be implemented and described in Table 2:

Table 2. Site Preparation

Unit	Acres	Site Preparation Method	Date of Completion

D. Reforestation:

[X] Clearcut, Salvage Operation

[] Partial Harvest:

[] Region I: leaving more than 50% live basal area (11 AAC 95(b)(3))

[] Region II/III: Relying on residual trees to result in a stocking level that meets standards of 11 AAC 95.375 (b 4). Stocking levels will be calculated subject to the methods below:

Table 3. Stocking Level Requirements

Average DBH (Diameter at breast height)	Residual Trees (Trees / acre)	Minimum Stocking Standard(Trees/ acre)	Percent Stocking
> 9"		120	%
6" to 8"		170	%
1" to 5"		200	%
Total Residual Stocking			%

Seedlings Required:

$$\text{Percentage Under stocked} = 100 - \text{Total Residual Stocking \%}$$

Percentage Under stocked = $100 - \frac{\quad}{\quad} \% = \frac{\quad}{\quad} \%$

$$\text{Seedlings/ Acre Required} = \text{Percentage Understocked}/100 \times 450$$

Seedlings/ Acre Required = _____ % /100 x 450 = _____

[X] Natural regeneration

List species: Birch, White Spruce, Black Spruce, Balsam Poplar

[X] Coppice

List species: Balsam Poplar

[] Artificial regeneration

[] Seeding-source of seed (general vicinity location of seed source)

[] Planting: Date of proposed planting: _____

Source of seedlings (location of seed source):

E. Slash Abatement

- ☒ Potential for insect infestations caused by slash accumulations exists. Slash abatement for controlling infestations will be implemented as required by 11AAC 95.370.
- ☐ Lop and scatter slash; accumulations will be kept to less than 2 feet in height.
- ☐ Slash will be disposed of by the operator ☐ Slash will be disposed of by the State
- ☐ Other - method of slash disposal: ☐ removal off site ☐ crushing or grinding ☐ burning
- ☐ Burn permits necessary from DOF and DEC to be acquired.
- ☐ The operator will contact the Division of Forestry local area office prior to ignition of debris.

F. Timber Harvest—Surface Water Protection:

- ☐ There are no streams or lakes abutting or within a harvest unit.
- ☒ Known surface waters and protection measures are described in Table 4 below.
Locations are included in the operational map in the Appendices

Table 4. Protection for Known Surface Waters

Unit	Waterbody Name	AS 41.17.950 Classification	ADF&G AWC #	Required Riparian Protection	Site-specific actions to minimize impacts on riparian area
All	Tanana River	Type III-B	334-40- 11000- 2490	Establish a 100'foot no cut Buffer on Commercial Operations	Title 16 Crossing Permit Required

Surface waters listed above were reviewed by the Department of Fish and Game:

- ☒ During the timber sale planning process
- ☒ During the agency review conducted for the Best Interest Finding for this sale
- ☐ During the drafting of this Forest Land Use Plan
- ☒ Stream Crossings (Title 16) Permits are needed per ADF&G Division of Habitat

Surface waters listed above were reviewed by the Department of Environmental Conservation:

- ☐ During the timber sale planning process
- ☒ During the agency review conducted for the Best Interest Finding for this sale
- ☐ During the drafting of this Forest Land Use Plan

Non-classified surface waters are subject to applicable BMPs in 11 AAC 95.

G. Wildlife Habitat:

- ☒ Wildlife species and allowances for their important habitats were addressed in writing by the Department of Fish & Game during the Best Interest Finding review.
- ☐ Wildlife species and allowances for their important habitats were addressed in writing by the Department of Fish & Game during the drafting of this Forest Land Use Plan.

Silvicultural practices to be applied to minimize impacts to wildlife habitat or wildlife management:

- ☐ Timber retention - concentrations of timber surrounding harvest units, or interspersed within harvest units to provide cover.

- ☐ Snag Retention- snags or isolated trees left for cavity nesting species.
- ☐ Large Woody Debris – concentrations of downed timber or logging debris interspersed within harvest units to provide cover left on site.
- ☒ Other actions; **the patchiness of timber types and the riparian buffers will create a great deal of edge habitat, and that dead and dying trees within the buffers (and the insects associated with them) will provide feeding, roosting, and perching habitat for a variety of bird species.**

H. Cultural and Historical Resource Protection:

- ☒ This project was reviewed by the State Historic and Preservation Office (SHPO).
- ☒ No artifacts have been reported within the project area(s).
- ☐ Known or likely sites have been identified and a mitigation plan is in place. (Describe the mitigation actions.)

I. Other Resources Affected by Timber Harvest and Management

- ☐ There are other resources and areas of concern besides surface water, fish habitat, and wildlife habitat that may be affected. Mitigations actions were addressed in the Best Interest Finding.

Table 5. Other Affected Resources/ Areas of Concern.

Impacted Resource	Reviewing Agency	Impact/ Mitigation Actions

- ☒ There are no affected resources or areas of concern other than surface water, fish habitat, and wildlife habitat, which are addressed in this Forest Land Use Plan.

IV. Roads and Crossing Structures

A. Road Design, Construction, and Maintenance:

Roads will be designed, constructed, and maintained to prevent significant adverse impacts on water quality and fish habitat (AS 41.17.060(b) (5)), and site productivity (AS 41.17.060(c) (5)). Roads will comply with the best management practices in the Forest Resources and Practices Regulations (11 AAC 95.285 – 95.335)

Roads or other means required for the access and removal of this timber from the harvest area(s) or unit(s) are listed in Table 6.

Table 6. Road Construction and Use

Road ID	Harvest Unit	Road Miles	Road Type	Maximum Grade	Constructed by	Maintained by
Winter Road	All	~4 Miles	Winter	0%	DOF/Operator	Operator

**Note: Roads must be less than 20% grade per 8 AAC 61.1060 Additional Logging*

Standards

B. Side Slopes / Mass Wasting:

For slopes over 50%, identify indicators of unstable areas (landslide scars, jack-strawed trees, gullied or dissected slopes, high density of streams or zero-order basins, or evidence of soil creep). Attach location specific road design that potentially mitigates identified areas of unstable soils.

Maximum percent side slopes: 0

☐ There are no slopes >50%

☐ There are no indicators of unstable areas where roads will be constructed

☐ Indicators of unstable areas were identified and will be mitigated by actions indicated below.

☐ Full benching will be constructed to help ensure slope stability

☐ Full benching is not required for roads in this project

☐ End hauling will be implemented to help ensure slope stability

☐ End hauling is not necessary for roads in this project.

Are you removing or replacing drainage structures? ☐ YES ☒ NO

General Erosion Control:

☐ grass seeding ☐ erosion control mats ☐ wattle ☐ Other: Waterbars

☒ not applicable

C. Crossing Structures:

☐ No crossing structures are needed within the project area.

☒ Crossing structures will be placed along access roads as described in the table below:

Table 7. Required Drainage and Crossing Structures on Known Surface Waters

Road	Mile / Station	Diameter Culvert	Bridge Type: -Log Stringer -Fabricated -Ice	AS 41.17.950 Stream Classification	Fish & Game AWC Number	Duration of crossing structure in place
Winter Road	0-4 Miles	N/A	Ice	Anadromous		Ice Dependent

D. Road Closure:

Roads constructed for the timber sale that are left open will be subject to maintenance standards under 11 AAC 95. 315. Otherwise, roads constructed for the timber sale will be closed, subject to standards under 11 AAC 95.320.

Table 8. Road Closures

Road ID	Unit	All Season/Winter	Estimated Closure Date	Projected Road Use after Timber Harvest

E. Material Extraction:

- ☒ There will be no material extraction sites in the project area.
- ☐ Material extraction and associated overburden disposal will be located outside of riparian areas and muskegs. Material extraction and disposal will be located as shown on the operation map, in a manner that prevents runoff from entering surface waters.
- ☐ Other:

F. Other Resources Affected by-Roads or Material Extraction:

List resources other than water, habitat or cultural resources potentially impacted by road construction, and indicate how impacts will be mitigated. Other affected resources could be, but are not limited to mining claims, scenic areas, recreational trails, etc.

Table 9. Other Affected Resources

Impacted Resource	Reviewing Agency	Impact/ Mitigation Actions

V. Approvals

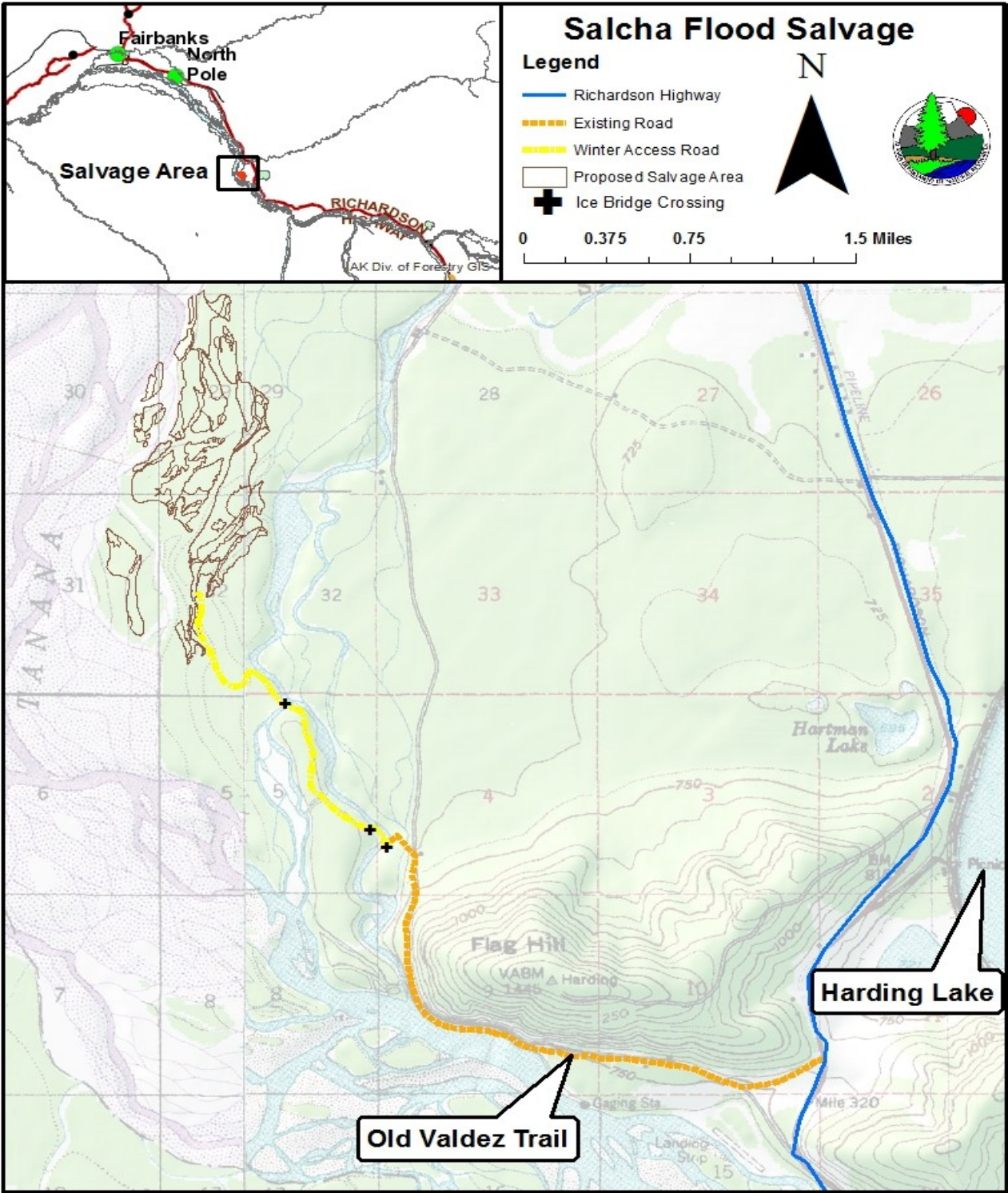
If you have any questions, please contact Paul Maki of the Fairbanks Area Office at (907) 451-2601 or e-mail paul.maki@alaska.gov.

This Forest Land Use Plan has been reviewed by the Division of Forestry and provides the necessary information for public and by agency review of the project described in this document.

Fairbanks Area Forester

Date

Appendix A: Timber Sale Maps



Appendix B: Agency/Public Comment Matrix

Commenter	Date Received	Comment	Action
ADF&G Division of Habitat Jim Durst	7/23/2015	<p>On page 6, Reforestation, we assume it is appropriate to check the boxes for Natural Regeneration and Coppice?</p> <p>For page 7, Table 4 and page 9, Table 7, the appropriate stream classification for the Tanana River is Type III-B, and the Anadromous Waters Catalog Number is 334-40-11000-2490. The heaviest documented use of the Tanana by chum salmon in the sale area is upstream of the harvest area in the lee of Flag Hill, and along the edges of the western-most harvest units.</p> <p>On page 8, G. Wildlife Habitat, we recommend you check Other Actions and note that the patchiness of timber types and the riparian buffers will create a great deal of edge habitat, and that dead and dying trees within the buffers (and the insects associated with them) will provide feeding, roosting, and perching habitat for a variety of bird species.</p>	Comments were considered and changes made in the FLUP to reflect those comments.
Alaska Department of Environmental Conservation Kevin Hanley	8/3/2015	Road and crossings need to be in accordance with 11 AAC 95.290 (f), (g), (h), and (i), in addition to 11 AAC 95.300 (a) (5).	Road and crossings will adhere to SOA FRPA Regulations.
Alaska SHPO/OHA Mckenzie S. Johnson	7/14/2015	No additional comment.	None